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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,127	05/29/2001	Jarmo Kuusinen	442-010327-US (PAR)	6474
7590	08/26/2004		EXAMINER	
Perman & Green 425 Post Road Fairfield, CT 06430-6232			MAURO JR, THOMAS J	
			ART UNIT	PAPER NUMBER
			2143	
DATE MAILED: 08/26/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,127

Applicant(s)

KUUSINEN ET AL.

Examiner

Thomas J. Mauro Jr.

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/29/2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 20010529, 20011226
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-22 are pending and are presented for examination. A formal action on the merits of claims 1-22 follows.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 9, 13, 17 and 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilchrist et al. (U.S. 5,745,695).

With respect to claim 1, Gilchrist teaches a method of managing a suspend state of a packet-switched service in a system which comprises:

a terminal and another peer, there being a packet switched connection between the terminal and the other peer over which the terminal and the other peer transmit packets to each other [**Gilchrist -- Col. 3 lines 27-31 – Data service is established between remote station MS and a serving node**], the terminal being able to use only either a circuit-switched service or a packet switched service at the same time [**Gilchrist -- Col. 2 lines 40-42 – GRPS packet-switched service can not be operated in parallel with the circuit-switched, i.e. voice services**], wherein when the terminal switches to the suspend state in the packet-switched service

to use a circuit switched service [**Gilchrist -- Col. 2 lines 48-53 – MS enters suspend state to suspend GPRS data services to enter into a non-GPRS service, i.e. voice call**]:

a predetermined first packet is transmitted from the terminal to the other peer to prevent transmission of packets from the other peer to said terminal during the suspend state [**Gilchrist -- Fig. 1, Col. 3 lines 11-15 and Col. 6 lines 57-58 – MS sends a suspend message to suspend communication between itself and serving node**].

With respect to claim 2, Gilchrist further teaches whereby transmitting said first packet before switching to the suspend state [**Gilchrist -- Fig 1. and Col. 3 lines 11-15 – The MS first sends a suspend message. A second acknowledgement message is received, upon which communication is then suspended**].

With respect to claim 3, Gilchrist further teaches wherein the switching to the suspend state by the terminal is a multi-stage process, and said first packet is transmitted during said process [**Gilchrist -- Figure 1 and Col. 3 lines 11-15 and 36-42 – First MS sends a suspend message to its serving node, i.e. peer, and then waits for a response message before entering into suspend state, i.e. a multi-stage process**].

With respect to claim 4, Gilchrist further teaches wherein the method comprises delaying the switching to the suspend state by the terminal to transmit said first packet [**Gilchrist -- Col. 3 lines 11-15 – Entering the suspend state is delayed until the MS transmits the suspend message and receives a reply/response message in return**].

With respect to claim 9, Gilchrist further teaches wherein the method also comprises aborting transmission of packets by the terminal in a controlled manner as the terminal switches to the suspend state **[Gilchrist -- Col. 3 lines 11-26 and lines 36-48 – Suspending of packets is controlled as the terminal does not just go into suspend mode, but sends a suspend message to serving node and waits for a reply/response]**.

With respect to claim 13, Gilchrist further teaches wherein when the terminal switches from said suspend state back to the packet-switched service:

a predetermined second packet is transmitted from the terminal to said other peer to continue transmission of packets from the other peer to the terminal **[Gilchrist -- Col. 3 lines 24-26 and lines 45-48 – MS sends a resume message to the serving node, i.e. peer, to return to GPRS transmission]**.

With respect to claim 17, Gilchrist further teaches wherein the terminal, on switching from the suspend state back to the packet-switched service, returns to the normal transmission mode of packets **[Gilchrist -- Col. 2 lines 60-63 – Upon returning to GPRS mode, data transfer is continued as before the suspension, i.e. normal transmission]**.

With respect to claim 21, this is an apparatus claim corresponding to the method claimed in claim 1. It has similar limitations; therefore, claim 21 is rejected under the same rationale.

With respect to claim 22, this is a software claim corresponding to the method claimed in claim 1. It is inherent that software/instructions are running on the various devices, i.e. MS, base station and serving nodes, in order to carry out the transmitting/receiving of data [Gilchrist -- Col. 2 lines 39-53 and Col. 3 lines 11-15 and lines 24-26]. Thus, the claims have similar limitations; therefore, claim 22 is rejected under the same rationale.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 7-8, 11-12, 14-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilchrist et al. (U.S. 5,745,695), as applied to claims 1, 9 and 13 above respectively, in view of Sen et al. (U.S. 6,208,620).

Regarding claim 5, Gilchrist teaches the invention substantially as claimed, as aforementioned in claim 1 above, including a packet-switched network [Gilchrist -- Col. 1 lines 12-15 and Col. 2 lines 48-53], however, fails to explicitly teach wherein the packet-switched connection is a TCP/IP connection and said packets are TCP/IP packets.

Sen, however, discloses a system for minimizing the effects of faults and disconnections over a wireless transmission channel, which includes a TCP/IP connection and sending TCP/IP packets [Sen -- Fig. 1A, Col. 3 lines 29-42, Col. 5 lines 34-41 and Col. 7 lines 34-38].

Both Gilchrist and Sen are concerned with maintaining the state of a connection in the event a disconnection or a switching of service occurs.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the connection and transmission of TCP/IP and accompanying packets, as taught by Sen into the invention of Gilchrist, because the use of such connection and packets were widely known and used at the time of the invention and further provide a reliable mechanism for transmitting and receiving data services.

Regarding claims 7 and 8, Gilchrist teaches the invention substantially as claimed, as aforementioned in claim 1 above, but fails to explicitly teach wherein the first value of a predetermined parameters is indicated to the other peer in said first packet to prevent transmission of packets from the other peer to said terminal during a suspend state (claim 7) and further wherein said first value of the predetermined parameters is value zero of an advertised windows parameter (claim 8).

Sen, however, discloses sending a packet containing a first value (claim 7), namely a value zero (claim 8), parameter in the advertised window parameters field to cause the receiving node to go into persist mode and stop sending packets [Sen -- Fig. 1B and Col. 9 lines 36-52].

Both Gilchrist and Sen are concerned with maintaining the state of a connection in the event a disconnection or a switching of service occurs by suspending data transfer.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the first value of a parameter in a packet to prevent further transmission of packets (claim 7) along with the first value having a value of zero of an advertised window parameter (claim 8), as taught by Sen into the invention of Gilchrist, in order to provide a well known and common method (RFC 893/1122) to cause a node to stop transmitting data service during a disconnection/or service failure thus reducing unnecessary packet traffic and packet loss.

Regarding claim 11, Gilchrist teaches the invention substantially as claimed, as aforementioned in claim 9 above, but fails to explicitly teach stopping the retransmission of packets by delaying reacting to the timeout of a retransmission timer.

Sen, however, discloses that retransmission, not the timer, can be turned off when it will not produce significant benefits [Sen -- Col. 7 lines 40-43]. Thus, this implies that time outs will continue to occur as the timer is not off, however, retransmission attempts, i.e. the reaction, will be stopped, i.e. delayed.

Thus, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the turning off of retransmission by stopping the retransmission of packets, as taught by Sen into the invention of Gilchrist, in order to prevent unnecessary packet traffic and packet loss when significant benefits will not be produced.

Regarding claim 12, Gilchrist-Sen teach the invention substantially as claimed, including wherein said delaying of the reacting to the expiry of the timer means that retransmission of

packets is delayed [Sen -- Col. 7 lines 40-49 – **By not transmitting packets upon normal retransmission criteria, i.e. timer expiring, retransmission is delayed**].

Regarding claims 14-15, Gilchrist-Sen teach the invention substantially as claimed, wherein said second packet indicates the second value of said predetermined parameter to the second peer to continue transmission of packets from the other peer to the terminal (claim 14) and wherein the second value of the predetermined parameter differs from said first value parameter (claim 15) [Sen -- Col. 9 lines 60-67 – **When transmission resumes, an ACK packet is sent using the original advertised window size parameter, i.e. different than zero, to begin transmission again normally**].

Regarding claim 16, Gilchrist-Sen teach the invention substantially as claimed, wherein said second packet is a TCP/IP packet [Sen -- Fig. 1A, Col. 3 lines 29-42, Col. 5 lines 34-41 and Col. 7 lines 34-38 – **Communication packets are TCP/IP packets, therefore, second, i.e. resume packet, would likewise be of that type because of the communication type employed**].

Regarding claim 19, Gilchrist-Sen teach the invention substantially as claimed, as aforementioned in claim 11 above, including wherein on returning to normal transmission mode, the terminal reacts to the expiry of the timer and retransmits packets [Sen -- Col. 7 lines 40-49 – **Retransmission of packets can be turned on/off, thus under normal data communicating**

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circumstances, i.e. no deep fades or disconnections (Col. 8 lines 17-18), retransmissions will occur due to the underlying benefit of retransmission].

6. Claims 6 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilchrist et al (U.S. 5,745,695).

Regarding claim 6, Gilchrist teaches the invention substantially as claimed, as aforementioned in claim 1 above, including sending a first packet, i.e. suspend packet, to prevent transmission of the packets from the other peer **[Gilchrist -- Fig. 1, Col. 3 lines 11-15 and Col. 6 lines 57-58 – MS sends a suspend message to suspend communication between itself and serving node].**

Gilchrist, however, fails to teach sending more than one, or multiple, packets of the same type. It has been upheld, *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. Therefore, the mere sending of more than one packet, i.e. duplication, to assure receipt of the message would have been obvious to a person and carries no patentable weight because the important concept, i.e. the sending of the packet, has already been established.

Regarding claim 20, Gilchrist teaches the invention substantially as claimed, as aforementioned in claim 1 above, including sending a second packet, i.e. resume packet, to

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resume the transmission of packets from the other peer [**Gilchrist -- Fig. 2, Col. 3 lines 24-26 – MS sends a resume message to resume communication between itself and serving node**].

Gilchrist, however, fails to teach sending more than one, or multiple, packets of the same type.

It has been upheld, *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. Therefore, the mere sending of more than one packet, i.e. duplication, to assure receipt of the message would have been obvious to a person and carries no patentable weight because the important concept, i.e. the sending of the packet, has already been established.

7. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilchrist et al. (U.S. 5,745,695) and Sen et al. (U.S. 6,208,620), in view of Darby, Jr. et al. (U.S. 6,400,281).

Regarding claim 10, Gilchrist-Sen teach the invention substantially as claimed, including a retransmission timer [**Sen -- Col. 7 lines 15-16**].

Gilchrist-Sen fail to explicitly teach stopping retransmission of packets by turning the retransmission timer off.

Darby, however, discloses a wireless radio communication system which turns off a retransmission timer of a node to prevent constant retransmission in a linear communications network [**Darby -- Col. 4 lines 23-33 and Col. 10 lines 28-35**].

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the turning off of a retransmission timer, as taught by Darby into the invention of Gilchrist-Sen, in order to prevent the unnecessary retransmission of packets during times of disconnection, failure or suspension.

Regarding claim 18, Gilchrist-Sen-Darby teach the invention substantially as claimed, as aforementioned in claim 10 above, including switching the retransmission timer on [**Darby -- Col. 13 lines 45-67 – Col. 14 lines 1-32 – Darby discloses a retransmission system to ensure all nodes receive information sent. Previously, Darby has shown that the retransmission timer can be turned off during certain circumstances (Col. 10 lines 28-35). Thus, because the timer can be turned off, it would imply that the timer can be turned on in a similar manner to allow retransmission to occur**].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mauro Jr. whose telephone number is 703-605-1234. The examiner can normally be reached on M-F 8:00a.m. - 4:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 703-308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



TJM

August 16, 2004



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